IN THE CLAIMS

The following are Claims 1-47.

Claims

1.   (Previously Presented) A system for efficient distribution of data to a client through a distributed computer network, comprising:

a management center connected to the network for determining an optimal delivery route to the client and directing the data along the optimal delivery route; and

at least one node connected to the network for relaying the data for delivery to the client;

wherein the management center comprises a mapping engine for mapping trace routes between the management center and the at least one node and between the management center and the client in order to determine the optimal delivery route, the at least one node and the client in order to determine the optimal delivery route.

2.   (Original) The system of claim 1 wherein the at least one node buffers the data before replicating a plurality of the data for delivery to multiple clients.

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3.   (Original) The system of claim 1 wherein the at least one node buffers the data before replication.

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4.   (Original) The system of claim 1 further comprising at least one content provider, the content provider providing at least one stream of data to the network.

5.   (Original) The system of claim 1 further comprising at least one zone master for assisting the management center with managing downstream nodes.

6.   (Cancelled)

7.   (Original) The system of claim 1 where in the management center further comprises a content manager for managing registration of content provider details.

8.   (Original) The system of claim 1 wherein the management center further comprises a node controller for monitoring and informing the at least one node.

9.   (Original) The system of claim 1 wherein the management center further comprises a log management controller for compiling and processing log statistics received from the at least one node.

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10. (Original) The system of claim 1 wherein the management center further comprises an interface engine for allowing access to management center databases.

11. (Original) The system of claim 1 wherein the data is distributed via channels.

12. (Original) The system of claim 11 wherein the data is time-staggered versions of identical content to achieve virtual fast-forward and rewind.

13. (Original) The system of claim 11 wherein clients are delivered local content at predetermined or incident-invoked times for a predetermined duration.

14. (Original) The system of claim 1 wherein the data is packet switched telephony data.

15. (Original) The system of claim 1 wherein the data is video conferencing data.

16. (Original) The system of claim 1 wherein the data is live media content.

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17. (Original) The system of claim 1 wherein the data is general Internet data.

18. (Original) The system of claim 1 wherein the data is on-demand content.

19. (Previously Presented) A system for distributing a single stream of data from a content provider through a distributed computer network to a plurality of clients within a class address range, comprising:

a management center connected to the network for determining optimal delivery routes to the plurality of clients and directing the stream of data along the optimal delivery routes, wherein the management center comprises a mapping engine for mapping trace routes between the management center and a plurality of nodes and for mapping trace routes between the management center and each of the plurality of clients in order to determine a first optimal node in a first optimal delivery route to a first client and to determine a second optimal node in a second optimal delivery route to a second client;

the first optimal node being connected to the network for replication of the stream of data for delivery to the first client; and

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the second optimal node being connected to the network

for replication of the stream of data for delivery to the

second client.

20.   (Previously Presented) The system of claim 19

wherein the first and second optimal nodes are the same node.

21.   (Original) The system of claim 19 wherein the first

and second optimal nodes replicate a plurality of the stream

of data for delivery to the plurality of clients.

22.   (Previously Presented) A method for distribution of

data to a client through a computer network, comprising the

steps of:

determining an optimal delivery route from a content

provider to a client, wherein determining the optimal delivery

route comprises mapping trace routes between a management

center and a plurality of nodes and between the management

center and the client to determine an optimal node;

transmitting a data stream from the content provider

through the network;

receiving the data at the optimal node to the client; and

relaying the data for delivery to the client.

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23.   (Original) The method of claim 22 further comprising the step of transmitting the data through a path of a plurality of nodes before reaching the optimal node.

24.   (Previously Presented) The method of claim 22 wherein the management center determines the path.

25.   (Original) The method of claim 22 further comprising the step of substituting content local to the optimal node into the data stream.

26.   (Previously Presented) A method for distribution of a single stream of data to a plurality of clients within a class IP address range, comprising the steps of:

determining an optimal delivery route from a content provider to a first client within the plurality of clients, wherein determining the first optimal delivery route comprises mapping trace routes between a management center and a plurality of nodes and between the management center and the first client to determine a first optimal node;

receiving the stream of data at the first optimal node to the first client and duplicating the stream of data for delivery to the first client;

determining an optimal delivery route to a second client within the plurality of clients; and

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receiving the stream of data at the second optimal node to the second client and duplicating the stream data for delivery to the second client.

27.   (Previously Presented) The method of claim 26 wherein the first and second optimal nodes are the same node.

28.   (Previously Presented) A method for determining an optimal delivery route from a content provider to a client within a network, comprising the steps of:

obtaining a trace route from a management center to the client;

comparing results of the trace route from the management center to the client to results of a plurality of trace routes from the management center to a plurality of nodes within the network to provide a hierarchical estimate of a plurality of more efficient network links from nodes within the network to the client; and

selecting a most efficient network link as the optimal delivery route.

29.   (Original) The method of claim 28 wherein the step of selecting further comprises performing trace route mappings between the node of the most efficient network link and the client to determine the optimal delivery route.

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30.   (Original) The method of claim 28 wherein the step of determining further comprises performing trace route mappings between the management center and the nodes.

31.   (Original) The method of claim 28 wherein the step of determining further comprises accessing a database in the management center containing trace route data for the nodes.

32.   (Original) The method of claim 28 wherein the step of determining further comprises accessing a location compiled table for node location data within a zone.

33.   (Original) The method of claim 28 wherein the step of determining further comprises accessing a best performing node index unique router address table.

34.   (Previously Presented) A system for distributing a single stream of data from a content provider to a plurality of clients through a distributed computer network, comprising:

means for determining an optimal delivery route from the content provider to a first client within the plurality of clients, wherein determining an optimal delivery route comprises mapping trace routes between the management center

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and the first client and mapping trace routes between the management center and a plurality of nodes;

means for receiving the stream of data at a first optimal node to the first client and duplicating the stream of data for delivery to the first client;

means for determining an optimal delivery route to a second client; and

means for receiving the stream of data at a second optimal node to the second client and duplicating the stream of data for delivery to the second client.

35.   (Original) The system of claim 34 wherein the first and second optimal nodes are the same.

36.   (Previously Presented) A computer readable medium having embodied thereon a program, the program being executable by a machine to perform the method step for determining an optimal delivery route from a content provider to a client within a network, the method steps comprising:

obtaining a trace route from a management center to the client;

comparing results of the trace route from the management center to the client to results of a plurality of trace routes from the management center to a plurality of nodes within the network to provide a hierarchical estimate of a plurality of

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more efficient network links from nodes within the network to

the client; and

selecting the most efficient network link as the optimal

delivery route.

37.   (Original) The computer readable medium of claim 36

wherein the step of selecting further comprises performing

trace route mappings between the nodes of the most efficient

network links and the client to determine the optimal delivery

route.

38.   (Previously Presented) A method for determining an

optimal delivery route from a first computing device to a

second computing device within a network, comprising the steps

of:

obtaining a trace route from a management center to the

first and second computing devices;

comparing results of the trace route from the management

center to the first and second computing devices to results of

a plurality of trace routes from the management center to a

plurality of nodes within the network to provide a

hierarchical estimate of a plurality of more efficient network

links from nodes within the network to the first and second

computing devices; and

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performing trace route mappings between nodes of the most efficient network links and the first and second computing devices.

39.   (Previously Presented) A system for efficient distribution of data to a client through a distributed computer network, comprising:

a management center connected to the network for determining an optimal delivery route to the client and directing the data along the optimal delivery route; and

at least one router device connected to the network for replication of the data for delivery to the client,

wherein the optimal delivery route is determined by performing mappings to and from the at least one router device and the management center and performing mappings to the client from the management center and comparing results of the mappings to the client from the management center to the results of the mappings to and from the at least one router device and the management center.

40 - 45.   (Canceled)

46.   (Original) The system of claim 1 wherein the management center downgrades lower priority clients from a higher quality of service network link to a less optimal

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network link when a higher priority client requests use of the higher quality of service network link.

47. (Original) The system of claim 1 wherein the at least one node is used to buffer and resynchronize multiple streams of content.

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